



THURSDAY, MAY 16, 1918

N. Y. State Barge Canal, Which Cost \$155,000,000, Greatest War Achievement

De Witt Clinton's "Big Ditch," Old Erie Canal, Dwarfed as Engineering Feat by New System of Waterways With Total Mileage of 446 Miles and 57 Concrete Locks, Each 328 Feet Long.

By Robert Welles Ritchie

THE State Barge Canal was opened to traffic yesterday. Behind this simple statement of a fact accomplished, an achievement completed, the average man in the street sees no great significance. For years he has glimpsed headlines in the papers about the Barge Canal being in this and that process of legislative discussion or engineering transition; but he has passed these headlines by. Stories about the State Barge Canal came to be old stuff with him.

Listen, Mr. Man-in-the-Street: This State Barge Canal is your canal. It was built with your money. It will bring money to your pocket, indirectly but surely. More than all that, this State Barge Canal is the greatest war achievement any single State in the Union has brought to a successful conclusion since Uncle Sam rolled up his sleeves and got into the trouble over yonder.

Through it a flood of coal will come from the West—coal which was held up on clogged railroads while you shivered in your arctic apartments last winter. Through it wheat and other grains for ourselves and the boys in France and the Allies will come by an all-water route from the Middle West. In short, a tremendous burden will be lifted off the shoulders of the over-worked railroads by the completion of this ribbon of water from Buffalo to the Hudson River.

Just what is the Barge Canal?

It is an inland waterway system of four branches which, like any well regulated railroad system, taps centres of production and centres of distribution and does the work of a carrier. These are the four branches: The old Erie Canal, widened and remodelled and running across the State from Waterford, on the Hudson River, to Tonawanda, where the Niagara River is entered and followed to Lake Erie and thence by a short run to Buffalo; the Champlain branch running northward along the State's eastern boundary from Waterford to Whitehall on the southern end of Lake Champlain; the Oswego branch from the old Erie Canal north of Syracuse and carrying to Oswego on Lake Ontario, and the Cayuga-Seneca Canal leaving the Erie west of Oswego junction and travelling southward to the two large lakes which give it a name.

The Erie, or main stem of the new system, is 339 miles long; the Champlain branch, 61; the Oswego division, 23, and the Cayuga-Seneca offshoot also 23 miles. The total mileage of this waterway system is 446 miles. In dimensions the canal varies according to locality. At all places it has a minimum depth of 12 feet. In earth sections of its territory it has a maximum width of 125 feet, which narrows to 94 feet in cuts through rock. In the beds and lakes through which it passes its dredged channel is 200 feet wide.

Fifty-seven locks, all of concrete and operated by electricity, are dispersed through its devious ramifications. The lock gates are massive steel doors, swinging on pivots and weighing as high as 200,000 pounds each. The Barge Canal locks are none less than 328 feet long and 45 feet wide. They will lift simultaneously six barges from one water level to another.

The most notable of these locks are at Waterford, near Troy. There a combined lift of 169 feet constitutes the greatest series of locks in the world—aside from those of the Panama Canal. Each lock was installed at an expense of a quarter of a million dollars. The lock at Little Falls exceeds in lift any of the Panama Canal. Forty and a half feet separate its levels.

One of the unique engineering features of the canal system—themselves a triumph in the craft of hydrostatics—are the movable dams which retain the waters of the Mohawk River and can be raised and lowered to govern the depth of water in that portion of the river which forms part of the canal.

What is the history of the Barge Canal and what has it cost?

There you are going back into the history of the State and of a young Nation.

When De Witt Clinton, an astute politician of the Revolutionary period and a man of wide vision, was Governor of New York he advocated the building of what his envious enemies denominated "the big ditch." This was to carry from Lake Erie to the Hudson River. Remember, there were no railroads in those days, and canals had long been demonstrated the most practicable form of transportation.

Gov. Clinton jammed his Erie

Canal project through the Legislature, and work actually commenced in 1817. The doughty old Governor lived to see his pet completed in 1823. It was nowhere more than four feet deep and forty-two feet wide, but it was considered a marvel of engineering.

Then, after a few years of busy traffic on the canal, the railroads began to be built, and before another quarter century had passed they put the old Erie out of business except for the most desultory freighting. The canal fell more and more into disuse.

In 1903 by referendum vote the State of New York decided to enlarge and modernize the old Erie, and the people authorized an expenditure of \$101,000,000 for this purpose. From that date amendments to the original scheme of amplification and improvements all along the line have jacked the total cost of completing the Barge Canal up to close onto \$155,000,000.

There have been legislative inquiries and professional yells from politicians and charges and countercharges, but the work has been carried through willy-nilly, until today the Empire State has the finest system of waterways of any in America, and second only to those of Great Britain and China, reluctant as we may be to concede to the Chinese any superiority.

A cycle in the method of making waterways has been completed with this finished work.

How far does the Barge Canal advance us in winning the war?

The canal will accommodate barges of 1,000 to 2,000 tons, operating under their own power—no towing as in the case of the old Erie. The canal system has been designed to accommodate a seasonal traffic of 10,000,000 tons. The season will be nine months, instead of seven, as of yore. Ice breakers will keep navigation open in all winter months except the most severe.

Consider 10,000,000 tons of carriers lifting that much work off the shoulders of the railroads and you will see how the new Barge Canal will speed us up in the complex problem of war traffic. And the area to be affected embraces most of the northeastern quarter of the United States. Seventy-five per cent of the State's population live beside its waterways and will be affected directly by the operation of our new water lane from the lakes to the sea.

Big Denver Organ a Whole Orchestra.

ONE of the greatest pipe organs in the country has just been installed in the Denver Auditorium at a cost to the city of \$85,000. It combines the qualities of a cathedral organ and a symphony orchestra. The largest of its pipes is two stories high, forty inches square and weighs 1,250 pounds. The smallest weighs half an ounce and has the diameter of a straw, says Popular Mechanics.

The temperature of the six chambers in which the main organ is housed is kept uniform by electric heaters. Above the ceiling is the echo organ, which has four sets of vox-humana pipes instead of the usual number. This instrument is operated by electricity, requiring 15,000 connections and 200 miles of wire. A grand piano is attached to the console, which may be lowered into the basement when not in use. The great instrument is equipped with an automatic player.

An organist has been employed who will give free noon hour concerts during the week, as well as on Sunday, besides which the organ will be used with the municipal chorus of 1,000 voices in special programmes. In spite of the huge size of the instrument, its volume can be reduced to accompany a single voice.

Major Gen. March's Three Daughters All War Brides

WHEN MISS JOSEPHINE MARCH, YOUNGEST DAUGHTER OF THE CHIEF OF STAFF OF THE U. S. ARMY, IS MARRIED THIS MONTH, ALL THREE GIRLS WILL HAVE MARRIED SOLDIERS WITHIN SIX MONTHS.



MRS. PAUL RUSSELL FRANK, second daughter of Major Gen. March. Her husband is a Captain in the United States Army.

MRS. JOHN MILLIKEN, nee Mildred March, eldest daughter of Major Gen. Peyton C. March, Chief of Staff of the United States Army. Capt. Milliken is with the American Expeditionary Forces.

MISS JOSEPHINE MARCH. She is to be married some time this month to Major Joseph M. Swing, aide to Gen. March.

Shall Polysyllabic Birds Rule the Earth?

It's a Tough Question, but the Answer Is Buy Thrift Stamps—Lash Yourself to a Raft of Them, for If You Don't, You One-Syllable Smiths, Browns and Greens Will Have No More Show Against the von Hindenburgs, Goofenheimmers and Mackensenzapps Than a Cream Puff Has Against a Pastry Hound—Buy 'Em Now, for It's No Use Whistling for a Dead Dog.

BY ARTHUR ("BUGS") BAER

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THE nut who banged himself on the skullpiece with a hammer because it felt so good when he stopped hasn't any more chance of absorbing the Nobel peace prize than the lady who sews buttons on her husband's socks. The bird who sinks his concrete-filled brogan at the mouth of the aisle channel and blocks up the rest of the summer car seats is an end seat how and is as liable to tar and feathers as the job who thinks Hawatha is still a popular air. The zamm who imagines that cloth top shoes and eight-belted coats are metropolitan stuff is as much of a goof as the saap who pushes a revolving door against the grain.

It takes all kinds of things to make a world, and we must take our pain with our pleasure, as the monkey said when he kissed the porcupine. The kewpie who spends his career trying to figure out which is the front end of a ferryboat is just as big a hick as the seed who carries a parcel by the string. They are all wrong, like a guy who presses the wrong lever in a telephone booth and turns on the shower bath.

There are lots of other wrong citizens in this vale of short changing and other sorrows, such as two-foot yardsticks, straffes with sore necks and genta who haven't collected a full crew of Thrift Stamps.

A Thrift Stamp is a postage published to take all the inflammation out of this twin hemisphere of goose-stepping and Withemocracy. If you haven't lashed yourself to a raft of Thrift Stamps, you are bliking yourself. And the man who blikis himself is the ace of fithoeds. Buy Thrift Stamps while you have the chance now, as there isn't any use of whistling for a dead dog. Buy Thrift Stamps now. Don't wait until the war is cured. The only way to cure the war is to give it Thrift Stamp pills. It doesn't matter whether you buy 'em wholesale or in houseopathic doses. Everybody who buys a stamp is a doctor. And the citizen who has both Liberty bonds and Thrift Stamps is entitled to have his mail addressed to George Citizen, L. B. and T. S. If you already have L. B. on your shingle, take a post graduate course in patriotism and add the T. S. degree to your title.

Have you aimed an eye at the mechanism of the Kaiser's syndicate of gorillas? There isn't a one-syllable bird in the bunch. You can't get into that Potsdam firm unless you have a double-jointed name that you couldn't fold up so it would go under the Brooklyn Bridge sideways. There is von Hindenburg. Goofenheimer, Wazzenbulloff, Mackensenzapp, Dinglingfiffer, Balloogaloo, Weenywurster and a million other four-

pronged names. You can't horn into that close corporation in Berlin unless you are tagged to an elastic name that sounds like a hoforau surf breaking on a Jimburger reef.

What chance will the Jemiths and KJones have if we don't sneeze that outfit flatter than an anemic potato fritter? What chance will the Zebrowns and the Hgreens have if the Kaiser gets a chance to dish out the plunder? No more chance than a cream puff has against a pastry hound. You have got to have four syllables in your name to jazz around with that bunch of long distance telephone warriors.

It's the one-syllable birds against the multiple syllable yeggs. It's a tough question. But the answer is a Thrift Stamp.

Aerial Trolleys Scale Alpine Peaks on Italian Front

MOUNTAIN lines are best defended by guns on the heights commanding the main passes, but these batteries may be silenced by artillery mounted on higher elevations. So the struggle along the Austro-Italian front has been to reach the very sky-line, the topmost peaks, and the Italians have done, thereby setting a record for Alpine warfare never before approached. By means of the "teleferica," an aerial trolley in which small cars are suspended from cables, men, guns, ammunition and even mules have been carried to positions 10,000 to 18,000 feet above sea level.

The teleferica which climbs to the 8,000-foot summit of the Pasubio is between three and four miles long, writes Lewis R. Freeman in Popular Mechanics, probably the longest on the Italian front. Motor and pack animals carry supplies as far as roads can be made; then the air line must be followed. The journey to the glacier at the summit of the Adamello is over a remarkable route, the first stage being by motor to the lower station of a teleferica. At the upper end is a mule-power, narrow-gauge railway, which is followed by a succession of telefericas and a dog-sled journey before the peak is reached. These cables sway dangerously in a high wind, sometimes bringing two passing cars together with a crash.

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Cave Men Best Husbands; Are Easiest to Manage And Tamed Like Bears

A Kindergarten Task to Domesticate Him—Just Feed Him Flattery—But Even in Love-Making His Method Is Obsolete and He Belongs in Only One Place—the Museum of Natural History.

By Nixola Greeley-Smith

THE husband of a New York clubwoman who has gone West to seek a divorce declares that if he had been a Cave Man instead of an eager collaborator in his wife's ambitions and career he would not be called upon now to face domestic bankruptcy.

Reading this announcement, I could not help thinking of an afternoon years ago, when the present divorce seeker complained to me that the New York papers did not take women's clubs seriously enough.

"I think I will name a committee," she said, "to go down to see all your editors and ask them to take us more seriously."

The husband who now regrets he is not a Cave Man interposed: "The papers will take you seriously whenever you do something serious. Why don't you try it?"

My own secret thoughts echoed him; but even then, I trembled for his future. What woman would not choose a Cave Man's rantings and exactions rather than cool, detached criticism?

Women do prefer Cave Men, to be sure, because Cave Men make by far the best husbands. For one thing, they are so easy to manage. Consider the Cave Man characteristics. What are they?

A childlike desire for mastery and an egregious vanity. The woman who wants to domesticate a Cave Man, who would set Samson happily to grinding corn for her, faces only a kindergarten task. She has merely to concede his superiority and put him to work. If she tells him every little while how big and brave and strong he is and how she marvels that he ever found anything to interest him in her puny little self, she can sit in a corner and sew a fine seam for the rest of her days.

If you have ever seen a trained bear vaudeville act you have marvelled at the willingness of the little bears to climb up on the kegs they have just been rolling, face the audience and drink out of bottles until their trainer tells them to get down.

The reason the bears hold the pose so well is that each bottle contains a small quantity of syrup, which trickles into their mouths very slowly, and the bears do not get down until the syrup is all gone. Substituting flattery for syrup, the method of training Cave Men is identical with that of training bears.

There is no woman so dull that she cannot tame the wildest Cave Man. It does not make any difference whether she spends her life being taught to swim or having the war explained to her, though of course if she chooses a Cave Man who holds his classes out of doors she will get more fresh air and have a better complexion.

I have seen just three perfect Cave Men in twenty years. As long ago as 1861, when Moliere produced "The School for Husbands," the Cave Man type was ridiculed and an ideal described who bears a striking likeness to the American husband of 1917.

"If you marry her she may demand the same freedom she enjoyed as a girl," says the Cave Man of the piece. "Certainly," replies Aristote, the model husband of 1861. "You will let her have patches and ribbons?" "Doubtless!"

But I do not believe there is any woman who has not in her secret heart a contempt for the Cave Man. Even in love-making, Cave Man methods are obsolete. The first time I ever saw or heard of them was at the age of seven, when I was taken to see Ada Rehan in "The Taming of the Shrew." Even then I remember thinking that Katharine must have been a pretty tame shrew from the beginning to be taken in by Petruchio's bullying swagger.

In the civilization of to-day the Cave Man belongs in only one place—the Museum of Natural History.

Beauty of Jewels Restored by "Gem Doctors"

WOMEN fortunate enough to possess precious stones should wear them more frequently, and not permit them to deteriorate through long disuse, according to jewelry experts. All jewels, especially pearls, seem to be injured if kept too long in darkness. It has also been shown that there apparently is some real basis for the old superstition that gems suffer when their owners are ill, to which has been coupled the belief that they foretell disaster. Their beauty is said to have been often restored when worn by a person in good health, which accounts for the reputation some persons have gained as successful "doctors" of sick gems.

Turquoises quickly lose their brightness when the wearer is in bad physical condition, and one London woman has built up a business by restoring their lustre, her patrons believing that she possesses some peculiar quality which redoubles the beauty of these stones.

Jewellers say that pearls may be affected by the dye in the lining of a jewel case, if shut up too long, but that their beauty will return if worn for a time next to the body. A long

bath in sea water often has the same effect. Some years ago it was reported that the pearls in a celebrated necklace of Mme. Thiers in the Louvre were shrinking in size and turning black. A sapphire, which, it was once believed, would change to a deep violet tint if the lady wearing it had not been true to her lover, is in the South Kensington Museum in London.

There are many stories of rubies which, by changing color, foretold the death of some one near and dear to the wearer, and red coral was once supposed to grow pale when the owner was about to be seriously ill. Many still have a superstitious feeling about opals.

A thorough cleaning or a better setting will improve the appearance of jewels. Their color brightens or diminishes according to the light in which they are shown, and they may be affected by acids, but there seems no doubt that some persons have a quality which brings out the richest and deepest colors of precious stones. From these are recruited the "gem doctors" who are called on from time to time to restore the beauty of precious jewels.